



May 2019 Newsletter

GEARS Founded August 13, 1939

Regular Events

O.A.R.S. GENERAL MEETING Second Friday, of month, 7:00 pm, at St. Paul's Church Parish Hall, 1430 Pine St., Oroville

G.A.R.S. Second Thursday of month, 6:30 pm Lutheran Church Hall, Artois.

G.E.A.R.S General Meeting, third Friday of month, Butte County Search and Rescue Bldg., Chico. Social hour 6:00 pm, meeting at 7:00 pm.

GEARS Breakfast 2nd Saturday of each month 9am Farmers Skillet 1818, 690 Rio Lindo Ave, Chico Everyone Invited.

Board Meetings: 2nd Saturday of each month at the Blood Source Building, Rio Lindo Ave Chico, after the monthly breakfast.

Butte A.R.E.S. 3rd Tuesday at The Veterans Hall, Rio Lindo Chico. Except Nov & Dec.

FCC EXAMS - GEARS VEC First Sunday of every even numbered month, at the Butte County Search and Rescue Building. Written test at 2:00 pm. For information or pre-registration call Gene Wright WA6ZRT 519-2519



Join GEARS on Facebook
www.facebook.com For timely
 news and additional information.

News

It's that time of year when things get busy. On Sunday April 28th, twenty-nine amateur radio operators assisted in the Chico Wildflower bicycle ride. I'm glad that many of us could give our time to assisting in this event. In May GEARS and ARES members will be assisting with the Chico Pioneer Day Parade.

Two GEARS members give presentations on at the Chico Idea Fab Lab, see below for more information.

At our last meeting we discussed plans for a new repeater site on the west side of the valley on Mt. St. John. We are working with GARS on this important project.

The GEARS auction is at our May meeting. We have a lot of great equipment which will be available. So you won't want to miss this.

In previous newsletters we discussed the Magnetron and Klystron microwave tubes. This month we have an article on the secret laboratory where these were used to develop radar for the WWII.

73

Jim Matthews K6EST
jiminchico@yahoo.com
 530-893-3314

May Calendar

G.E.A.R.S General Meeting, Friday, May 17th Butte County Search and Rescue Bldg., Chico. Social hour 6:00 pm, meeting at 7:00 pm. This month it's the GEARS auction.

GEARS monthly breakfast Saturday, May 11th, 9 am at Farmers Skillet Cohasset and Rio Lindo Chico.

GEARS board meeting is before the general meeting at 5 pm Friday May 17th. Search and Rescue Building.

Butte A.R.E.S. Meeting Tuesday, May 21st at Chico Veterans Hall 7pm. Contact Dale Anderson, KK6EVX 826-3461 for more information.

VEC Testing Sunday June 2nd at the Search and Rescue Building 2 pm.

NETS:

GEARS Club Net Tuesdays 7:30 PM 146.850 MHz - PL 110.9

GARS Club Net: Monday, 7:00 pm 147.105 MHz + PL 110.09

Simplex Net Thursday 7:30 p.m. 146.52

Sacramento Valley Traffic Net Nightly 9:00 PM 146.850 MHz - PL 110.9

ARES Nets: Butte Mondays 20:00 145.290 MHz - PL 110.9

Yuba Sutter Thursdays 19:00 146.085 MHz + PL 127.3

Glenn Thursday 19:30 147.105 MHz + PL 100.0

GEARS Annual Auction

Friday May 17th 7 PM at the Search and Rescue Building

This year we will have a large assortment of radios, antennas, coax, microphones, supplies and equipment available. You won't want to miss this one. Cash or checks accepted for payment.

GEARS / GARS Repeater Project

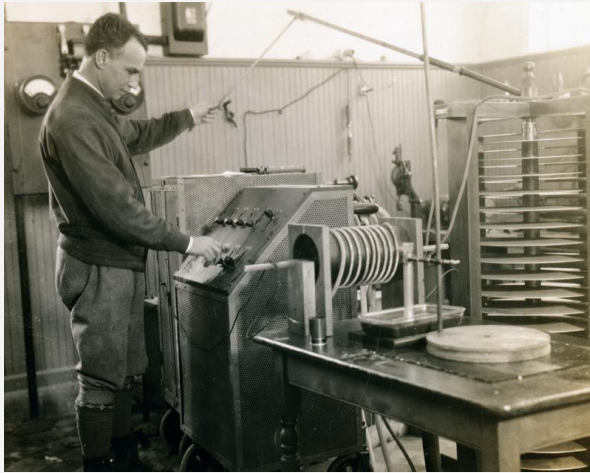
GEARS and GARS are working on a new repeater which will be located on the west side of the valley on Mt. St. John, west of Stonyford. This new site will provide improved VHF coverage throughout the entire North Valley especially in Paradise, Magalia and Centerville. The board of directors has appointed Michael Ellithorp KF6OBI, Philip Zabell KI6SMN of GARS and Jim Matthews K6EST and Michael Favor N6FAV to oversee this project. We have received funding from the North Valley Community Foundation for this project. We will provide more information as this project progresses.

GEARS members gave presentations at the Chico Idea Fab Lab

At a recent event Kent Hastings WA6ZFY and Stephan Lonis KM6RSO each gave a presentation at the Idea Fab Labs. The event was NORCON on April 13th which drew about 30 people. Kent spoke about election security, Stephen discussed our disaster response at the Camp Fire with some pictures of the ARES station. Stephen pointed out how ham radio allowed communication even when cell phone towers and phone lines were no longer working. Stephen also discussed digital modes such as FT8 and packet.

The Secret WWII Laboratory That Developed RADAR

He made a fortune on wall street, Alfred Lee Loomis was smart enough to sell before the market crashed in 1929. Taking advantage of his considerable wealth, Loomis increasingly indulged his interest in science. He established a personal laboratory near his mansion within the exclusive enclave of Tuxedo Park, New York.



He and his small staff conducted pioneering studies in spectrometry, high-frequency sound and capillary waves, electro-encephalography, and the precise measurement of time, chronometry.

His Tuxedo Park laboratory was nicknamed the "Tower House" and "The Palace of Science". He turned this Tuxedo Park laboratory into a meeting place for the most visionary minds of the twentieth century.

His laboratory was the best of its kind, containing equipment that few universities could afford. His reputation spread quickly, particularly in Europe, where money for science was scarce. Loomis often sent first-class tickets to famous European scientists so that they could travel to the United

States to meet with their peers and collaborate on projects. They would be picked up at the airport or train station and brought to Tuxedo Park in his limousine. At first, some in the scientific community called him an "eccentric dabbler," but soon his laboratory became the meeting place for some of the most accomplished scientists of the time, such as Albert Einstein, Werner Heisenberg, Niels Bohr, James Franck, and Enrico Fermi. Scientists who worked personally with him were convinced of his capability and industry. His wealth, connections, and charm all made him highly persuasive.

In the late 1930s, Loomis's scientific team turned their attention to radio detection studies, building a crude microwave radar which they deployed in the back of a van. They drove it to a golf course and aimed it at the neighboring highway in order to track automobiles, then took it to the local airport, where they tracked small aircraft.

Loomis had visited the United Kingdom and knew many of the British scientists who were working on radar. Britain, at war with Germany, was being bombed nightly by the German Luftwaffe, while America was trying to stay out of the war. British scientists had developed the cavity magnetron, which allowed their radar to be made small enough for installation in aircraft.

On hearing that the British magnetron had a thousand times the output of the best American transmitter, Loomis invited its developers to Tuxedo Park. Within a month, they had outgrown the Tuxedo Park location so they moved to a building on the MIT campus, it would be called The MIT Radiation Laboratory, and later known as the Rad Lab. Now with government funding they were able to develop far more sophisticated RADAR systems. The resulting 10-cm radar was a key technology that enabled the sinking of U-boats, spotted incoming German bombers for the British, and provided cover for the D-Day landing. Loomis took advantage of all his business acumen and industry contacts



to ensure that no time was wasted in its development and implementation. It was said "Radar won the war; the atom bomb ended it." For more see the PBS program "Secrets of Tuxedo Park"

<https://www.pbs.org/video/the-secret-of-tuxedo-park-zfeomc/>

Club Officers:

President.....Jim Matthews, K6EST
Vice-President.....Kent Hastings, WA6ZFY
Secretary.....Stephan Lonis, KM6RSO
Treasurer.....Kathy Favor, K6FAV
Director.....Rick Hubbard, KI6VOS
Director.....Arnott Smith, KF2TM
Director.....Dale Anderson, KK6EVX
Past President.....Tom Rider, W6JS

DO YOU HAVE OLD QST MAGAZINES IN SEARCH OF A NEW HOME?

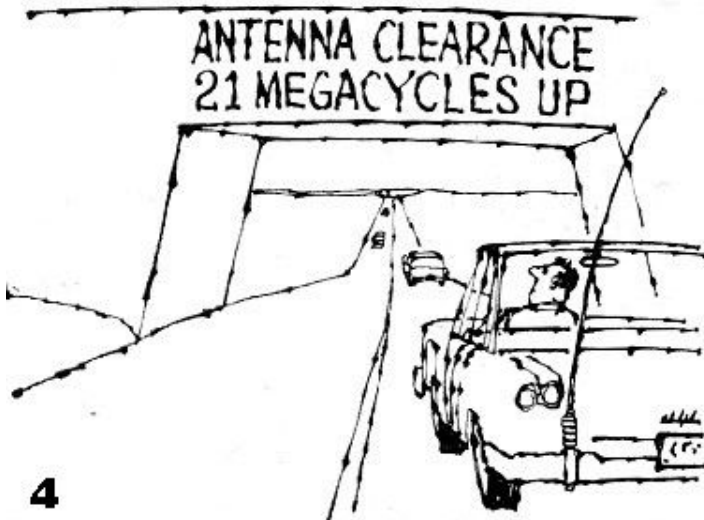
Gene Wright has that future home for your QST's, through his project to place QST Magazines in professional offices throughout Chico. Labels placed on the QST's will advertise the Golden Empire Amateur Radio Society, encourage the readers to consider Ham Radio as an interesting hobby, one of not only fun, but which provides opportunities for many and various community services.

Bring your QST's to Gene at the Club meetings or contact:

Gene WA6ZRT
530-519-2519



"I am NOT a toaster-fixer ... I'm a radio technician!"



--TB O.M., I REALLY MUST SIGN NOW--